



AVOX Systems

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SERVICE INFORMATION LETTER

Scott Aviation, 225 Erie Street, Lancaster NY 14086-9502 USA
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ENGINE INDICATING - ATA SYSTEM 77

P/N 13340-00 OIL TEMPERATURE GAUGE (FORMERLY REFERRED TO AS RN-2100 OIL TEMPERATURE GAUGE)

REPLACEMENT PROCEDURES

1. BACKGROUND

This Service Information Letter (SIL) contains important information about the oil temperature gauge and its replacement. It is important to read this SIL. Scott Aviation has received reports of oil leakage from the oil temperature gauge connection to the engine. This leakage is believed to be the result of the replacement of only part of the gauge assembly during maintenance. This SIL gives guidance on the installation of replacement oil temperature gauge assemblies.

You are authorized to make copies of this SIL and give them to other persons. If you copy this SIL, you must copy all of the SIL.

2. EFFECTIVITY

A. Aircraft

This SIL applies to all makes and models of aircraft that have a Scott P/N 13340-00 Oil Temperature Gauge installed. A Scott oil temperature gauge can be approved for installation in an aircraft in one of the two ways that follow:

(1) Scott Aviation holds Parts Manufacturer Approval (PMA) to manufacture and sell the P/N 13340-00 oil temperature gauge for installation on American Champion Aircraft types 7ECA, 7GCAA, 7KCAB, 7GCBC, 8KCAB, & 8GCBC.

(2) The Scott P/N 13340-00 oil temperature gauge may be installed on other aircraft where such installation has been approved by the cognizant airworthiness authority through a procedure acceptable to the cognizant airworthiness authority (FAA Form 337, Supplemental Type Certificate (STC), etc.).

B. Oil Temperature Gauge

This SIL applies to all Scott P/N 13340-00 oil temperature gauges. A typical oil temperature gauge is illustrated in Figure 1.

3. WARNINGS AND CAUTIONS

WARNING: FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS SIL CAN CAUSE DAMAGE TO THE GAUGE, LOSS OF ENGINE LUBRICATION, AND RESULT IN LOSS OF AIRCRAFT AND INJURY OR DEATH TO PERSONS.

CAUTION: DO NOT DISASSEMBLE THE GAUGE. DISASSEMBLY OF THE GAUGE WILL CAUSE DAMAGE TO THE GAUGE.

4. DESCRIPTION

This SIL identifies a potential problem that can be caused by improper replacement of Scott Aviation Oil Temperature Gauges P/N 13340-00. Scott has learned of occurrences where the gauge sensor was damaged and engine oil leaked due to the incorrect installation of the gauge.

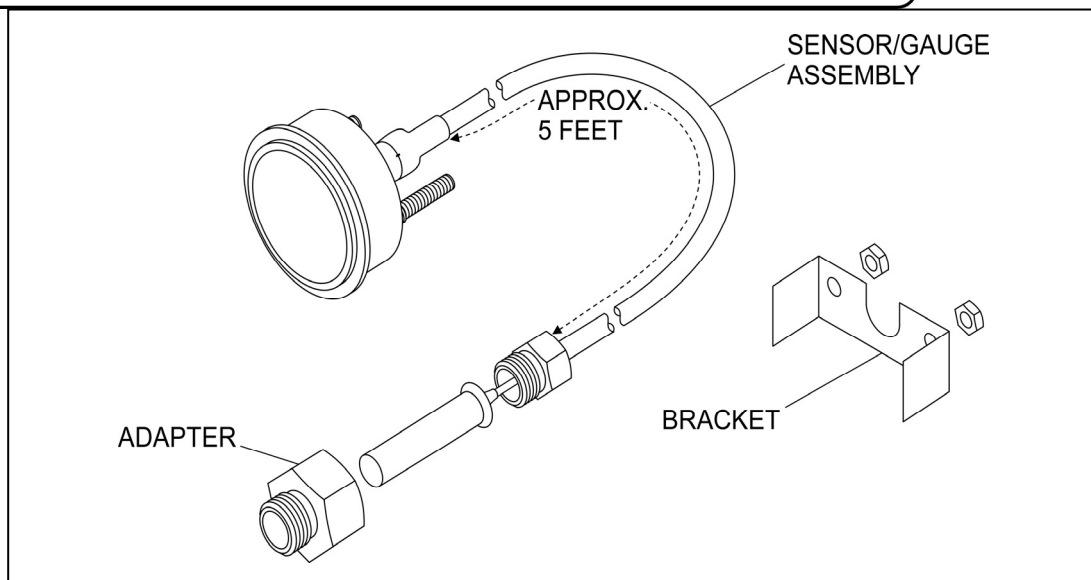


Figure 1
Complete Scott Oil Temperature Gauge

4. DESCRIPTION (Continued)

A. BACKGROUND

Two different types of oil temperature sensors have been supplied on the 13340-00 gauge. The earlier type, manufactured before 1998, had a flat flange at right angles to the sensor as shown in Figure 2. The current type, manufactured during 1998 and later, has a conical shaped flange on the sensor as shown in Figure 3.

The sealing operation is accomplished by three parts: a steel compression nut that is captive on the capillary assembly, the copper flange of the sensor, and the steel adapter that is connected to the engine. The soft copper of the sensor bulb flange is squeezed between the hard steel of the compression nut and the adapter and conforms to the surfaces to provide a positive metal to metal seal against oil leakage. For the connection to seal, the surfaces of the three parts must mate.

B. PROBLEM

The current design of the gauge has conical mating surfaces as shown in Figure 3. The compression nut and the sensor are assembled at the time of manufacture and cannot be separated. The adapter must be a separate part to accomplish the installation.

If the wrong adapter is installed, the mating surfaces may not seal. For example, if a new gauge is purchased, but the already installed flat-faced adapter is not removed and replaced by the new adapter, then the conical mating surface of the sensor and the compression nut will not seal with the old flat-faced adapter. Installation of a new gauge with a conical flange and compression nut into an old adapter with a flat surface can result in damage to the sensor and loss of engine oil.

5. RECOMMENDATION

When installing a replacement gauge, it is critical that the compression nut, sensor bulb and adapter making up the complete oil temperature gauge be installed together. Make sure to remove the existing adapter from the engine, then install all three new parts.

Refer to the engine manufacturer's manual or maintenance instructions for the correct gasket if a gasket is required. If you find an oil leak at the adapter to compression nut joint and a mismatch is suspected, replace the entire gauge assembly (including the adapter).

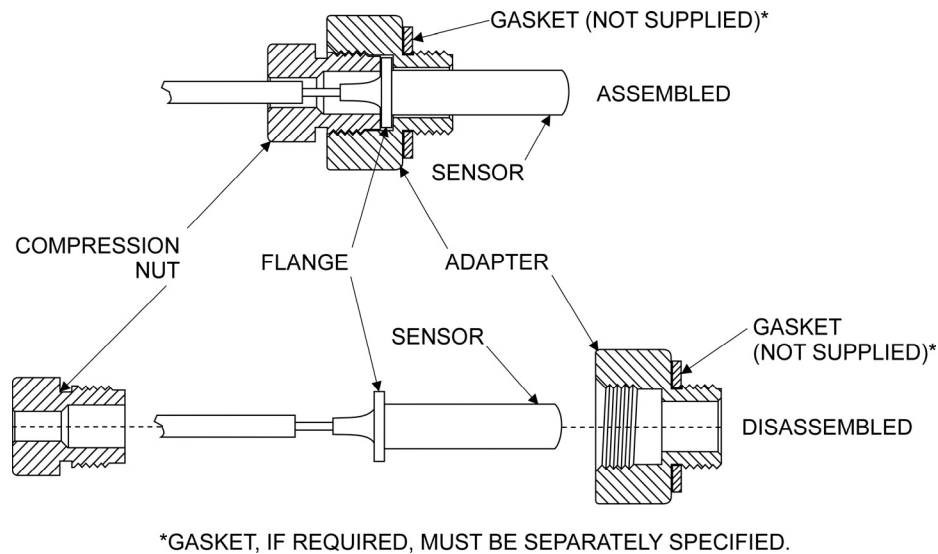


Figure 2
Square Type Flange

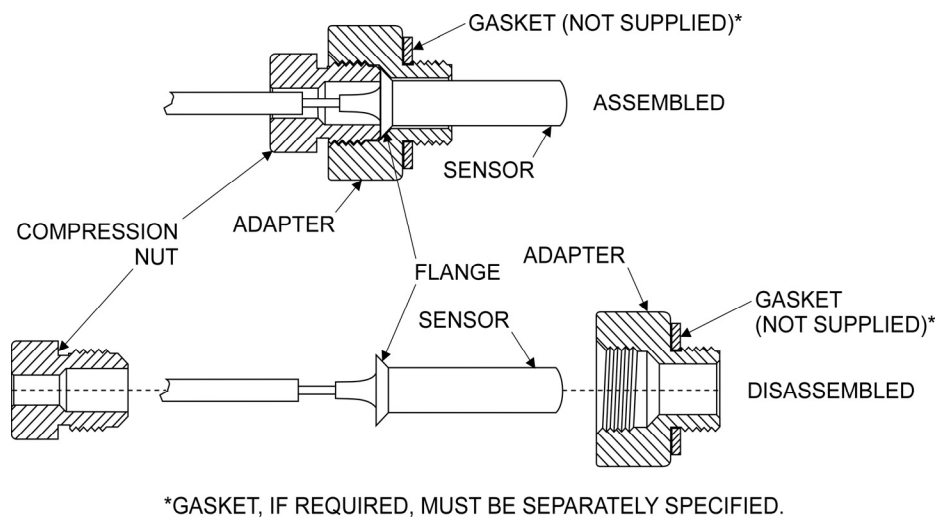


Figure 3
Current Conical-Type Flange



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6. HOW TO CONTACT SCOTT AVIATION

- A. To buy an oil temperature gauge, contact any Scott Aviation Authorized Distributor. Refer to the Scott web site (www.scottaviation.com) for a list of distributors.
- B. To get technical aid, contact the Scott Technical Support Department.
 - Bill Waterrose:
Telephone: 1-716-686-1725
 - Fax: 1-716-681-1089
 - E-mail: wwaterrose@tycoint.com
 - Jodi Mollenda:
Telephone: 1-716-686-1798
 - Fax: 1-716-681-1089
 - E-mail: jmolenda@tycoint.com
- C. To get a copy of SIL 77-01 or the revision status of a publication, contact the Scott Technical Publications Department.
 - Telephone: 1-716-683-5100
 - Fax: 1-716-681-1089
 - E-mail: techpubs@tycoint.com
 - Publications Index: log onto www.scottaviation.com; click on Aviation/Government Products, click on Aviation Product Information, click on Technical Product Information
- D. To get a gauge repaired or overhauled, contact any Scott Authorized Repair and Overhaul Facility. Refer to the Scott web site (www.scottaviation.com) for a list of authorized facilities.

New Contact Information (September 1, 2004):

AVOX Systems Inc. (Formerly Scott Aviation, Inc.)

New Technical Support e-mail: avoxcs@avox.zodiac.com

New Technical Publications e-mail: avoxtechpub@avox.zodiac.com

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